



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

C3-4-4KA
Job Sheet 176841



Part No: C3-4-4KA

Job Qty: 2 ea

Part Name: Keeperless Load Beam Assembly - C3 Hook



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 5/2/18

Job Tracking No:

Due Date: 5/3/18

Created By: Linda Lacelle

Type: SOLD

Description:

Note: DWG C3-4-4A/C3-4-4KA Rev 10 IPP Rev A 18.03.02 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	2 Ea		5/3/18	0.00	0.00	Start Up Small Fab-4		22/18/05/04
105	Rework	2 pcs		5/3/18	0.00	0.00	Mill Conv 1		22/18/05/04
110	QC	2 pcs		5/3/18	0.00	0.00	QC5		30
130	Outsource	2 pcs		5/3/18	0.00	0.00	Outsource15		CC18518A/05/18
140	Packaging	2 pcs		5/3/18	0.00	0.00	Packaging2		AT 19/05/18
150	QC	2 pcs		5/3/18	0.00	0.00	QC6		1 MAY 18 2018
160	Packaging	2 pcs		5/3/18	0.00	0.00	Packaging3-2		18-05-22 GA-Akin
170	QC21-SA	2 Ea		5/3/18	0.00	0.00	QC21		21

Part Op 130 - Issue P/O to Groupe Altech: P/O 039815 - Nickel plate, QQ-N-290, Class 2, Grade C - Nickel Plate
Descriptions: .0009-.0011 -Certificate of Conformity is required
160 - Identify and Stock

MAY 22 2018

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
C3-4-4AP	C3 Load Beam Assembly	2 pcs (1 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	C3-4-4AP	2	19	0

Part Specifications

Specifications could not be found.



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Plex 5/2/18 8:30 AM dart.lacelle.linda

Container No: S068648



Part: C3-4-4KA

Job No: 176841

Serial No/Batch: S068648

Revision: 10

Inspector:

Date: 05/04/18

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

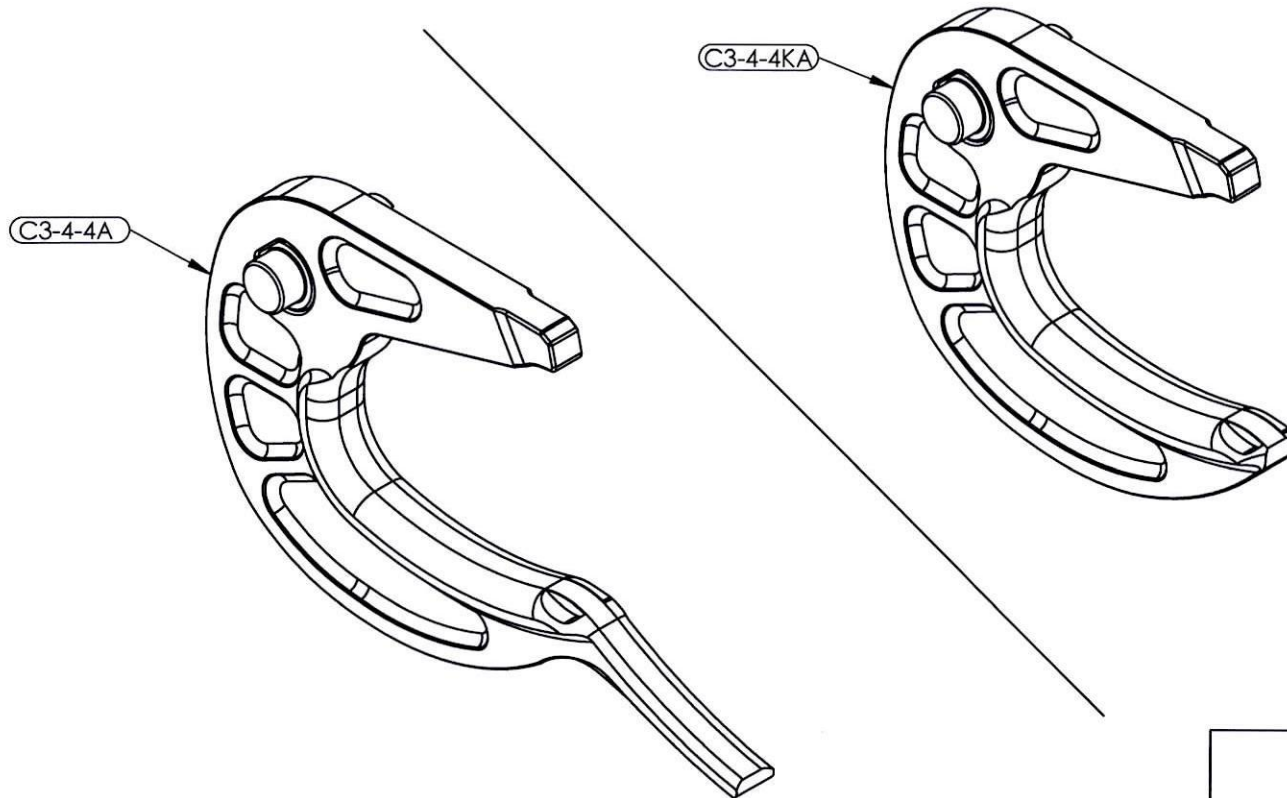
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
6		AS DRAWN BY APICAL	10/31/2011		
7		ADDED BAKE NOTE	12/9/2013	JAG	
8	14-0106	CH'D TITLE BLOCK WAS RED BARN IS DART. CH'D TOLERANCE NON-CRITICAL DIMENSIONS. C3-4-2 ADDED BAG & LABEL NOTE. C3-4-4 ADDED MACHINE ENGRAVE NOTE.	8/6/2014	DJN	RW
9	15-0126	C3-4-4KA, C3-4-4K ADDED TO DRAWING FOR KEEPERLESS OPTION, CH'D DWG NO. WAS C3-4-4A IS C3-4-4A / C3-4-4KA.	6/2/2015	RJC	JAG
10	15-0198	UPDATED TO NEW DRAFTING STANDARDS. C3-4-2 CORRECTED GD&T. C3-4-4 CH'D DIMS WAS 8.16 IS 8.159 ±.030, WAS 5.13 IS 5.133 ±.030. DELETED DIM R.25. C3-4-4K CH'D DIMS WAS 5.833 IS 5.833 ±.030, WAS 5.133 IS 5.133 ±.030. DELETED DIM R.25.	8/27/2015	DPD	JAG

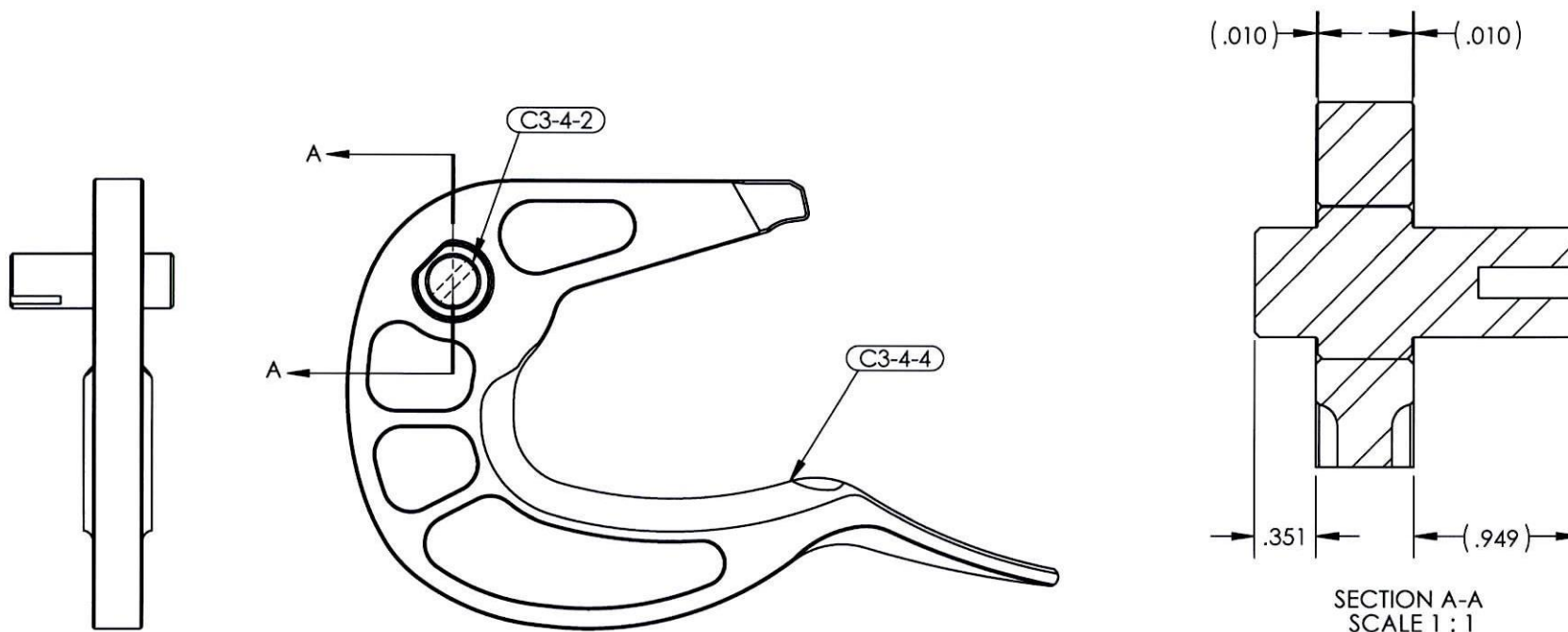


DART AEROSPACE	
TITLE C3 LOAD BEAM ASSEMBLIES	
DWG NO. C3-4-4A / C3-4-4KA	REV 10
MAT'L UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1	DRAWN BY: CLOUGH APPROVED <i>J. Gilbert</i> HEAT TREAT FINISH SPEC
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	USED ON MODEL
SCALE 1:2	DATE 6/2/2015
SHEET 1 OF 6	

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
	X		C3-4-4A	1	LOAD BEAM ASSEMBLY			2
	1		C3-4-4		LOAD BEAM	4140/41402		5
1	1		C3-4-2		TRUNNION	4140 Q&T / 4142 Q&T		4
X			C3-4-4KA	1	C3 KEEPERLESS LOAD BEAM ASSEMBLY			3
1			C3-4-4K		LOAD BEAM	4140/4142		6
ASSY C-3-4-4KA	ASSY C-3-4-4A							

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
7		ADDED BAKE NOTE	12/9/2013	JAG	



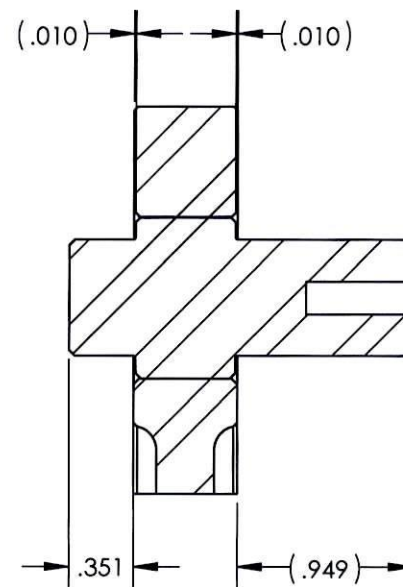
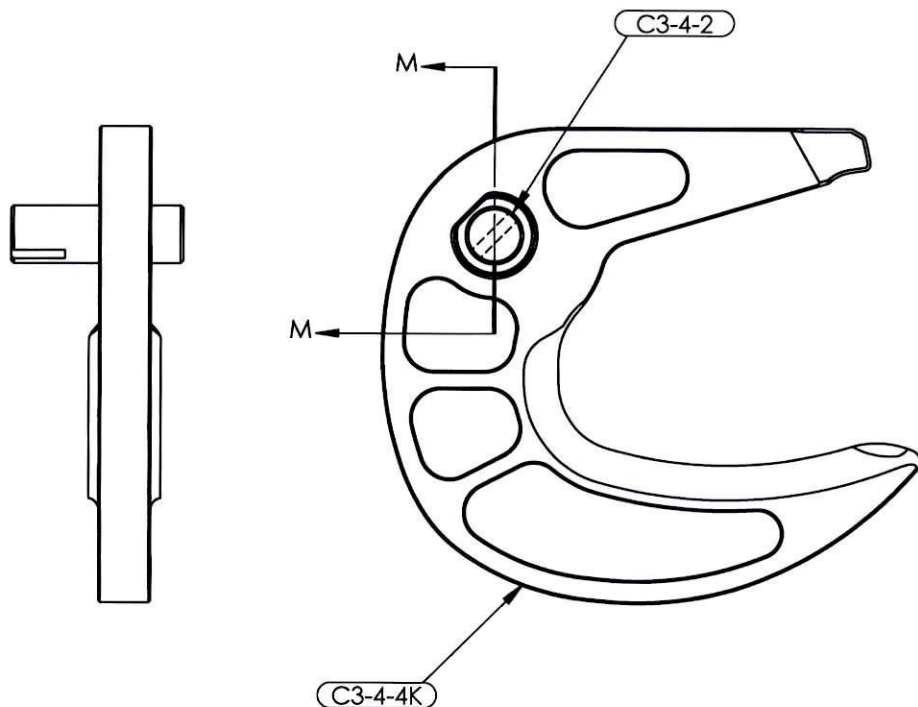
NOTE:
1. NICKEL PLATE .0009 - .0011, BAKE AFTER PLATING.

C3-4-4A
LOAD BEAM ASSEMBLY

DART AEROSPACE	
TITLE C3 LOAD BEAM ASSEMBLIES	
DWG NO. C3-4-4A / C3-4-4KA	REV 10
MAT'L UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 .XX ± .01 .X ± .1 FRACTIONS ± 1/8 ANGLES ± 5° 1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	DRAWN BY: APICAL APPROVED: <i>D Weil</i> HEAT TREAT FINISH SEE NOTE 1 SPEC USED ON MODEL
SCALE 1:2	DATE 11/18/2009 SHEET 2 OF 6

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
9	15-0126	C3-4-4KA ADDED TO DRAWING FOR KEEPERLESS OPTION.	6/2/2015	RJC	JAG



SECTION M-M
SCALE 1 : 1

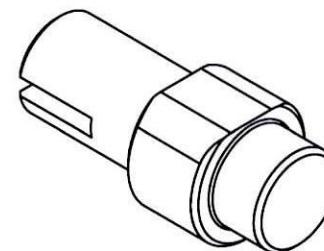
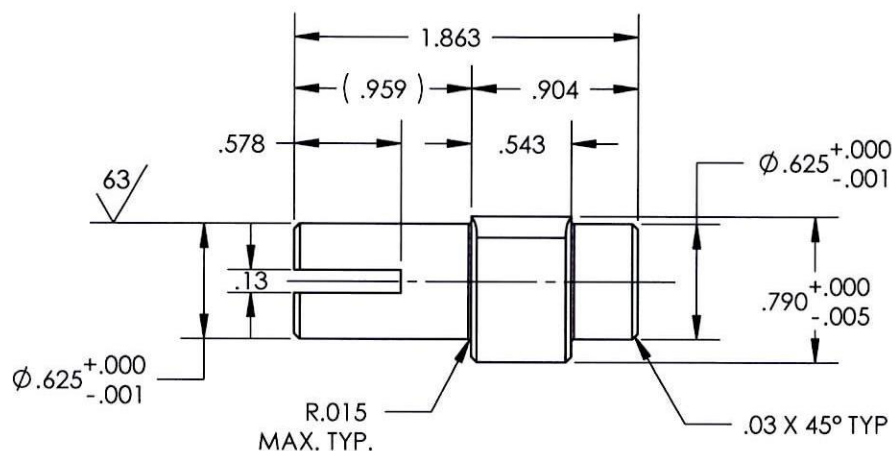
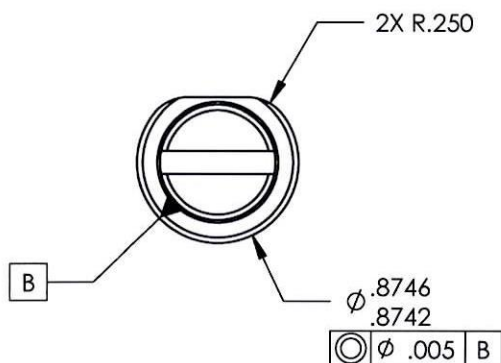
NOTE:
1. NICKLE PLATE .0009-.0011, BAKE AFTER PLATING.

C3-4-4KA
C3 KEEPERLESS LOAD BEAM ASSEMBLY

DART AEROSPACE	
TITLE C3 LOAD BEAM ASSEMBLIES	
DWG NO. C3-4-4A / C3-4-4KA	REV 10
MAT'L UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	DRAWN BY: CLOUGH APPROVED: <i>J. Gilbert</i> HEAT TREAT FINISH SEE NOTE 1 SPEC USED ON MODEL
SCALE 1:2	DATE 6/2/2015
SHEET 3 OF 6	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
6		CH'D DIMENSIONS FROM R.4375 +.0000 -.0005. TO $\phi .8746 - .8742$, CH'D TOLERANCE FOR $\phi .790 + / - .005$ TO $\phi .790 +.000 / -.005$	8/8/2012	RJC	SE
8	14-0106	ADDED BAG & LABEL NOTE	8/6/2014	DJN	RW
10	15-0198	C3-4-2 CORRECTED GD&T.	8/27/2015	DPD	JAG



NOTES:

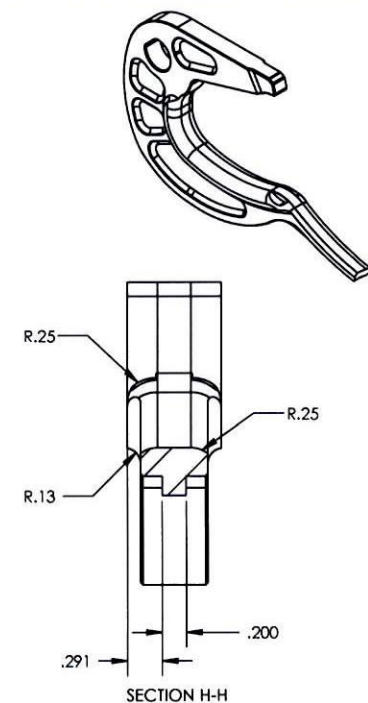
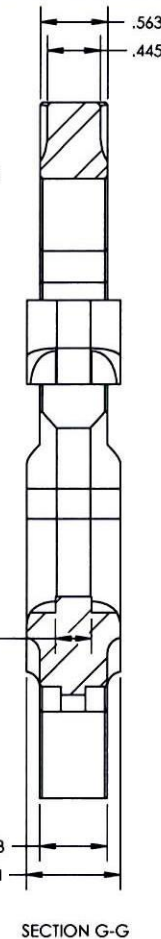
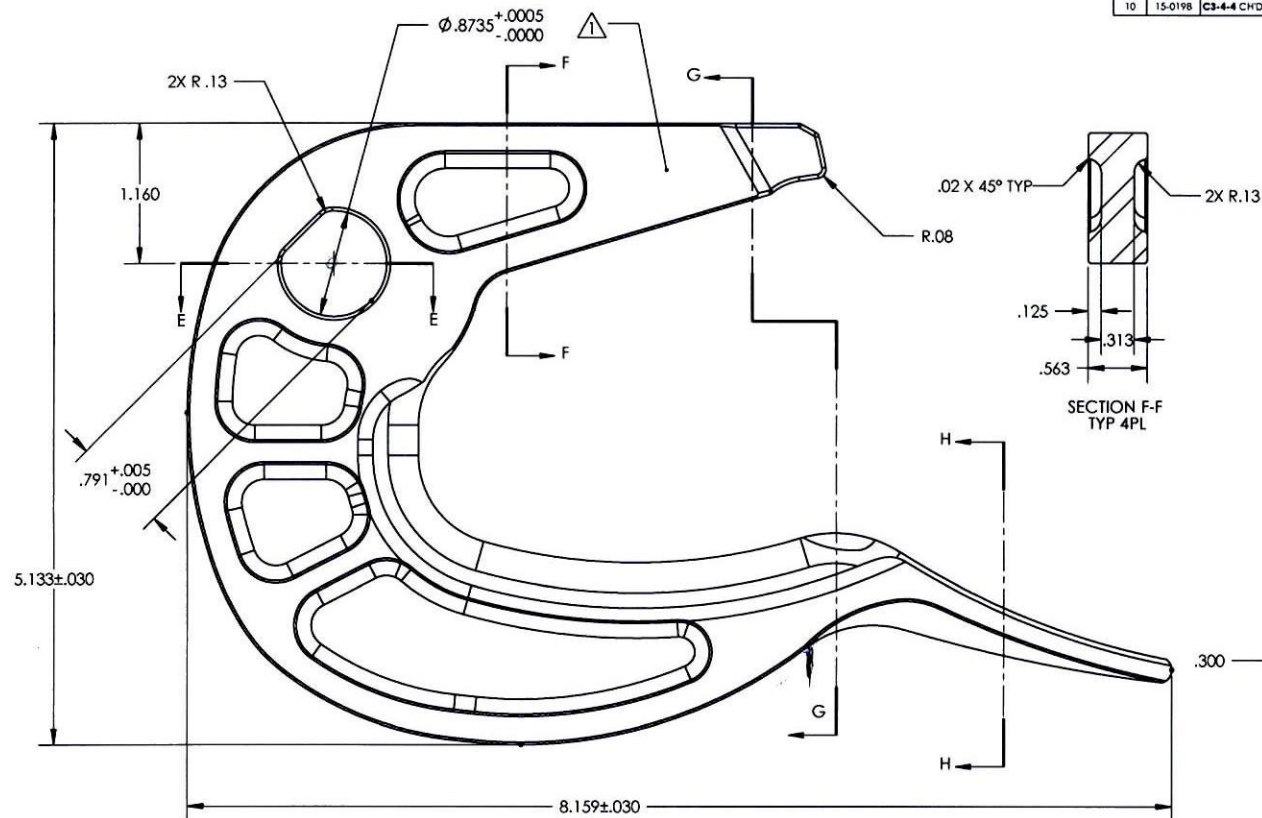
1. NICKEL PLATE AFTER PART HAS BEEN ASSEMBLED WITH LOAD BEAM C3-4-4.
2. BAG & LABEL WITH BATCH NUMBER.

C3-4-2
TRUNNION

DART AEROSPACE	
TITLE C3 LOAD BEAM ASSEMBLIES	
DWG NO. C3-4-4A / C3-4-4KA	REV 10
MAT'L 4140 Q&T / 4142 Q&T	DRAWN BY: APICAL
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	APPROVED <i>D Weil</i>
.XXX ± .005 FRACTIONS ± 1/8	HEAT TREAT
.XX ± .01 ANGLES ± 5°	FINISH
.X ± .1	SPEC
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	USED ON MODEL
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE 1:1	DATE 10/31/2001 SHEET 4 OF 6

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REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
6		CHD MATERIAL FROM 4340, CHD RADIUS FROM 2X R.095 TO 2X R.13, CHD FILLET RADIUS AT END OF LOAD BEAM FROM .063 TO .125.	8/8/2012	RJC
8	14-0106	ADDED MACHINE ENGRAVE NOTE.	8/6/2014	DJN
10	15-0198	C3-4-4 CHD DIM WAS 8.16 IS 8.159 ±.030, WAS 5.13 IS 5.133 ±.030, DELETED DIM R.25.	8/27/2015	DPD



NOTES:

1. MACHINE ENGRAVE BATCH NUMBER.
2. NICKEL PLATE AFTER PART HAS BEEN ASSEMBLED WITH TRUNNION C3-4-2.
3. USE DXF PROFILE FOR CONTOURS.

DART AEROSPACE	
TITLE: C3-4-4A / C3-4-4KA	
DWG NO: C3-4-4A / C3-4-4KA	REV: 10
MAT'L: 4140/41402	DRAWN BY: APICAL
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.	APPROVED: <i>D. Mott</i>
.XXX ± .005	FRACTIONS ± 1/8
.XX ± .01	ANGLES ± .5°
.X ± .1	FINISH: RC 53-56
1. BREAK ALL SHARP EDGES .015 X 45°	SPEC: USED ON MODEL
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE: 1:1	DATE: 10/31/2001
SHEET 5 OF 6	

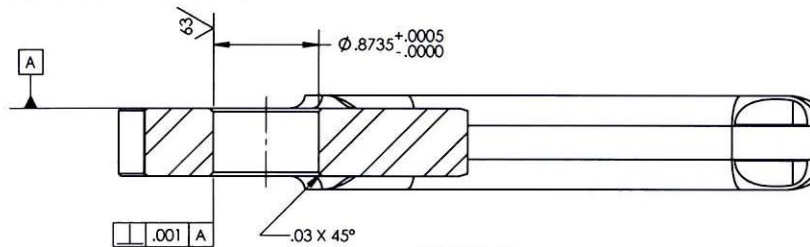
SECTION E-E

C3-4-4

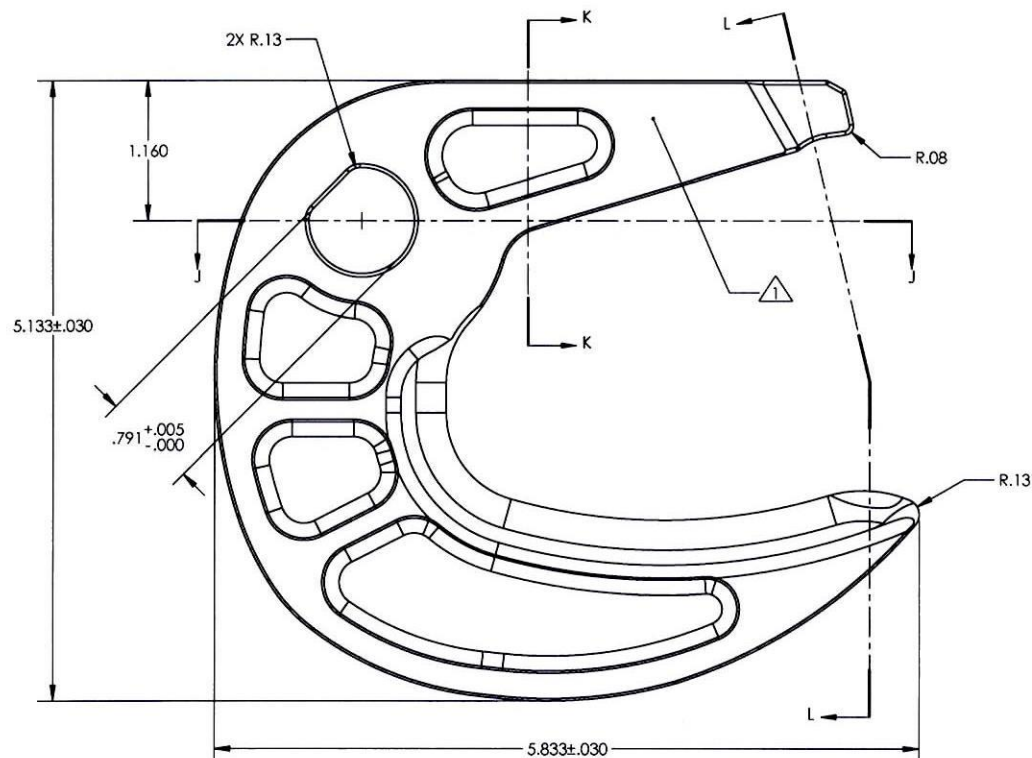
LOAD BEAM

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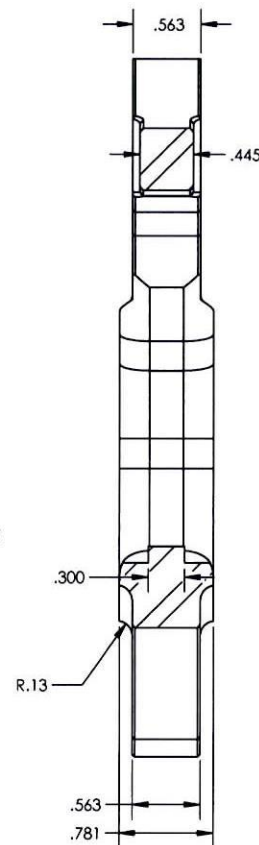
REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
9	15-0126	C3-4-4K ADDED TO DRAWING FOR KEEPERLESS OPTION.	6/2/2015	RJC	JAG
10	15-0198	C3-4-4K CH'D DIMS WAS 5.833 IS 5.833 ±.030, WAS 5.133 IS 5.133 ±.030. DELETED DIM R.25.	8/27/2015	DPD	JAG



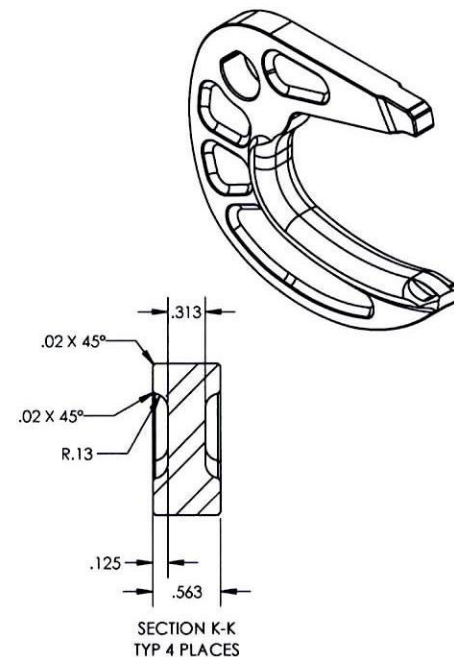
SECTION J-J



C3-4-4K
LOAD BEAM



SECTION L-L



NOTES:

1. MACHINE ENGRAVE BATCH NUMBER.
2. NICKEL PLATE AFTER PART HAS BEEN ASSEMBLED WITH TRUNNION C3-4-2.
3. USE DXF PROFILE FOR PART CONTOURS.

DART AEROSPACE	
TITLE C3 LOAD BEAM ASSEMBLIES	
DWG NO. C3-4-4A / C3-4-4KA	REV 10
MAT'L 4140/4142	DRAWN BY: CLOUGH
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	APPROVED <i>[Signature]</i>
.XXX ±.005 .XX ±.01 .X ±.1	TEST RC 53-58
FRACTIONS ± 1/8 ANGLES ± 5°	FINISH SPEC
1. BREAK ALL SHARP EDGES .015 ±.45° OR .015R	USED ON MODEL
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE 1:1	DATE 6/2/2015
SHEET 6 OF 6	



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO039815

Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

PO No: PO039815
PO Date: 5/7/18
Due Date: 5/10/18
**Purchase Order
Revision:**
Revision Date:
Ship-To Contact: Tsimiklis, Chrisoula

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Items

Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	176841	C3-4 4KA	Keeperless Load Beam Assembly - C3 Hook -Issue P/O to Groupe Altech: P/O -Nickel plate, QQ-N-290, Class 2, Grade C -Nickel Plate .0009-.0011 -Certificate of Conformity is required	Firmed	5/10/18	2 pcs	0 pcs	2 pcs	\$68.00/pcs	\$136.00

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DAS
11
9-89

Line Item Note ** rush ***

2	176623	RB AN8515-1-3	Bolt -Issue P/O to Groupe Altech; PO -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required	Firmed	5/10/18	8 pcs	0 pcs	8 pcs	\$23.00/pcs	\$184.00
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Line Item Note ** rush ***

3	176383	RBT18649-3-2	Base -Issue P/O to GROUPE ALTECH; PO -ANODIZE COLOR BLACK, PER IAW MIL-A-8625F TYPE 2 CLASS 2, Water sealant -Certificate of Conformity is required	Firmed	5/10/18	5 pcs	0 pcs	5 pcs	\$32.00/pcs	\$160.00
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Line Item Note ** rush ***

Grand Total: \$480.00

Order Notes



Certificat de Conformité / Certificate of Compliance

(009081-3)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Bon de Livraison / Packing Slip

009081 - 3

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.		Bon de commande Client Customer Purchase Order No.			
17-May-2018		Aman			039815			
#Ligne Line#	No. de Série / # Pièce Part Number /Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Quantités / Quantities Comm. /Ordered Exp/ Shipped		Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order
1	C3-4-4KA Rev.	C3-4-4KA 01 - E-NIC STEEL 500 [E-NICKEL STEEL 500] QQ-N-290 CLASS 2 GRADE C 0.0009-0.0011 THICK AND BAKE	E-NICKEL STEEL CH	2	2	0	0	0

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11

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Notes Additionnelles / Additional Notes

[Handwritten signature]

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.